

REMARKS

Claims 69 and 81 are amended. New claims 95-96 are added. Support for the new claims is provided by exemplary embodiments of the invention disclosed in the originally-filed application at, for example, pages 12-13.

Claims 69, 73, 74, and 76-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tonti et al. (U.S. Patent No. 6,436,749 B1) in view of Zheng et al. (U.S. Patent No. 6,794,232 B2). Claims 70-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tonti/Zheng as applied to claim 1 above, and further in view of Taylor, Jr. et al. (U.S. Patent No. 6,573,160 B2). Claim 75 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tonti/Zheng as applied to claim 73 above, and further in view of Lee (U.S. Patent No. 6,306,743 B1).

Regarding the obviousness rejection against independent claim 69 based on the combination of Tonti and Zheng, claim 69 recites *a first layer comprising n-type doped silicon within the PMOS gate and over the first metal-containing material*. The claim further recites *a second layer comprising n-type doped silicon within the NMOS gate and over the second metal-containing material*. That is, each gate, the PMOS gate and the NMOS gate, has a layer of n-type doped silicon over a metal-containing material.

The Examiner is respectfully reminded that the MPEP states that to establish *prima facie* obviousness of a claimed invention, all of the claimed limitations must be taught or suggested by the prior art. MPEP §2143.03 (8th ed., rev. 3, vol. 2) citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The Examiner incorrectly alleges Figs. 4 and 4a of Tonti teach such positively recited limitations (pgs. 2-3 of paper no. 092705). However, Figs. 4 and 4a teach "a self-aligned silicide (WSi_x) 20" (please note: incorrectly marked as "26" in Figs. 4 and 4a) **over** a metal barrier layer 16 (col. 2, ln. 65 to col. 3, ln. 45). There is

no teaching by Tonti that silicide 20 is doped, whether n-type or p-type (*see* col. 3, ln. 43 to col. 4, ln. 17). Accordingly, it is inconceivable that this teaching of Tonti discloses n-type doped silicon over a metal-containing material as positively recited.

Additionally, Tonti teaches several different embodiments of the Tonti device having a lightly doped polysilicon layer 42 over a tungsten nitride layer 16 (col. 4, lns. 23-26; Figs. 5-7). However, Tonti clearly further teaches that layer 42 will have the “common implant” as the source/drain regions (col. 4, lns. 32-47), and a review of Figs. 5-7 of Tonti demonstrates that the respective source/drain regions for respective NMOS and PMOS structures are **never both doped with n-type dopants**. That is, polysilicon layer 42 of respective NMOS and PMOS structures is never doped with n-type dopants for both NMOS and PMOS structures. Accordingly, Tonti can not possibly teach or suggest a first layer comprising n-type doped silicon within the PMOS gate and over the first metal-containing material **and** a second layer comprising n-type doped silicon within the NMOS gate and over the second metal-containing material as positively recited by claim 69.

Moreover, Zheng and the art of record, singularly or in any combination, fail to teach or suggest n-type doped silicon over a metal-containing material. Accordingly, it is inconceivable that any combination of the art of record with Tonti teaches or suggests a first layer comprising n-type doped silicon within the PMOS gate and over the first metal-containing material **and** a second layer comprising n-type doped silicon within the NMOS gate and over the second metal-containing material as positively recited by claim 69. Pursuant to the above authority, since all of the claimed limitations are not taught or suggested by the prior art, a *prima facie* case of obviousness has not been established with respect to claim 69. Claim 69 is allowable.

Claims 70-80 and 95 depend from independent claim 69, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not taught or suggested by the art of record.

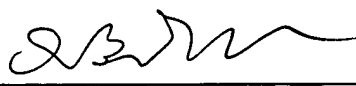
Regarding the obviousness rejection against independent claim 81 based on the combination of Tonti and Zheng, claim 81 recites a first layer comprising n-type doped silicon within the PMOS gate and over the first metal-containing material and a second layer comprising n-type doped silicon within the NMOS gate and over the second metal-containing material. This is the same rejection presented against independent claim 69 wherein claim 81 includes the same positively recited limitations of claim 69 addressed above. Accordingly, for the reasons stated previously, Tonti and Zheng fail to teach or suggest the positively recited limitations of claim 81. Claim 81 is allowable.

Claim 96 depends from independent claim 81, and therefore, is allowable for the reasons discussed above with respect to the independent claim, as well as for its own recited features which are not taught or suggested by the art of record.

This application is believed to be in immediate condition for allowance, and action to that end is respectfully requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

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